

PATENT COOPERATION TREATY

PCT
NOTIFICATION OF TRANSMITTAL
OF COPIES OF TRANSLATION
OF THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

(PCT Rule 72.2)

From the INTERNATIONAL BUREAU

To:

RECEIVED
 2003. 3. 17
 MATSUMOTO, Takashi
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 Almond Akasaka Building 9th Floor, &
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 Minato-ku, Tokyo 107-0052
 Japan

Date of mailing (day/month/year) 25 February 2003 (25.02.03)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference 00-51809	
International application No. PCT/JP01/00691	International filing date (day/month/year) 01 February 2001 (01.02.01)
Applicant FUJITSU LIMITED et al	

1. Transmittal of the translation to the applicant.

The International Bureau transmits herewith a copy of the English translation made by the International Bureau of the international preliminary examination report established by the International Preliminary Examining Authority.

2. Transmittal of the copy of the translation to the elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following elected Offices requiring such translation:

US

The following elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

JP

3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report.

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. (41-22) 338.70.10	Authorized officer Eliott PERETTI (Fax 338 9090) Telephone No. (41-22) 338 9906
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Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 00-51809	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP01/00691	International filing date (day/month/year) 01 February 2001 (01.02.01)	Priority date (day/month/year)
International Patent Classification (IPC) or national classification and IPC G11B 7/135		
Applicant FUJITSU LIMITED		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 12 December 2001 (12.12.01)	Date of completion of this report 18 June 2002 (18.06.2002)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP01/00691

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☐ the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the claims:
 pages _____, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the drawings:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims	1-6, 10, 11	YES
	Claims	7-9	NO
Inventive step (IS)	Claims		YES
	Claims	1-11	NO
Industrial applicability (IA)	Claims	1-11	YES
	Claims		NO

2. Citations and explanations

Document 1: JP, 11-328716, A (NEC Corporation), 30 November 1999 (30.11.99), Full text; all drawings, (Family: none)
Document 2: JP, 10-302289, A (Ind. Technol. Res. Inst.), 13 November 1998 (13.11.98), Full text; all drawings, (Family: none)
Document 3: JP, 10-320815, A (Yamaha Corporation), 4 December 1998 (04.12.98), Full text; all drawings, (Family: none)
Document 4: JP, 6-259804, A (Matsushita Electric Ind. Co., Ltd.), 16 September 1994 (16.09.94), Full text; all drawings, (Family: none)
Document 5: JP, 9-270145, A (Sony Corporation), 14 October 1997 (14.10.97), Full text; all drawings, (Family: none)
Document 6: JP, 2000-268391, A (Minebea Co., Ltd.), 29 September 2000 (29.09.00), Full text; all drawings, (Family: none)
Document 7: JP, 2000-105943, A (Sanyo Electric Co., Ltd.), 11 April 2000 (11.04.00), Full text; all drawings, (Family: none)
Document 8: 2001-76371, A (Sanyo Seiki Mfg. Co., Ltd.), 23 March 2001 (23.03.01), Full text; all drawings, (Family: none)
Document 9: JP, 2000-260052, A (Pioneer Electronic Corporation), 22 September 2000 (23.09.00)), Full text; all drawings, & EP, 1037206, A

The above documents 1 through 9 were cited in the ISR.

The aperture 4 and aberration compensation means 5 described in document 1 are equivalent to the "aperture limiting means" and "second optical element ... compensating for aberration" of the invention relating to claim 1. No significant art can be found with regard to the other optical elements. In the above-cited invention of document 1, a first and second collimator lens is not used; however, it would be easy for a party skilled in the art to conceive of collimating for each light beam of differing wavelength based on documents 2 through 4. The surface shape for aberration compensation set forth in claim 4 is nothing more than a matter of design. The matters set forth in claim 5 would be easy for a party skilled in the art to conceive of by referring to paragraph 48 of document 5. The matters described in claims 2, 3, and 6 are nothing more than extremely common means used with optical heads. In light of the above, the inventions relating to claims 1 to 6 do not appear to involve an inventive step over documents 1 to 5.

The initializing mirrors 20, 26, 34 and 38 set forth in document 6 have one flat surface and one concave surface, and a beam of light with a wavelength that passes through the flat surface is reflected within the mirror by the other surface. Document 6 states that the full reflection film 22 provided on the circular region and the light absorbing film 31 provided on all places other than the circular region function as opening control means. If this is the case, then the above mirrors can be taken to include the flat/concave reflection mirror and opening control

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

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Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of Box V (Citations and explanations):

unit in the invention relating to claim 7. Claim 7 states that the concave surface unit is formed continuous with the outer periphery flat surface unit; however, given the common issue of aberration compensation, what degree of compensation to be carried out on what portion of a light beam is a matter of design for an optical system, and the difference between a flat surface and concave surface is merely expressed as a numerical difference, namely, difference in curvature. Furthermore, because the manner in which the continuity of the above surfaces is corresponded to a light beam is not specified, and no extraordinary effect is demonstrated, the continuity between the above flat surface and concave surface is found to have no significant technical difference from the concave mirrors of document 1. Therefore, the inventions relating to claim 7, and to claims 8 and 9, which merely specify a commonly known optical means, do not appear to involve an inventive step over document 6.

If the invention described in document 6 and the inventions relating to claims 10 and 11 are compared, it is found that the former does not describe disposing a first and second optical element in, respectively, a first direction and a direction perpendicular to said first direction, separated by a prescribed distance; however, this point would be easy for a party skilled in the art to conceive of based on document 7. Therefore, the inventions relating to claims 10 and 11 do not appear to involve an inventive step based on documents 6 and 7.

The inventions relating to claims 1 to 11 all relate to an optical storage device, and therefore appear to possess industrial applicability.

INTERNATIONAL SEARCH REPORT

International application No.

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	JP 9-270145 A (Sony Corporation), 14 October, 1997 (14.10.97), Full text; all drawings (Family: none)	5 1-4, 6
X Y	JP 2000-268391 A (Minebea Co., Ltd.), 29 September, 2000 (29.09.00), Full text; all drawings (Family: none)	7-9 10-11
Y	JP 2000-105943 A (Sanyo Electric Co., Ltd.), 11 April, 2000 (11.04.00), Full text; all drawings (Family: none)	10-11
A	JP 2001-76371 A (Sankyo Seiki Mfg. Co., Ltd.), 23 March, 2001 (23.03.01), Full text; all drawings (Family: none)	1-11
A	JP 2000-260052 A (Pioneer Electronic Corporation), 22 September, 2000 (22.09.00), Full text; all drawings & EP 1037206 A	7-11

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP01/00691

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl⁷ G11B7/135

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int. Cl⁷ G11B7/12-7/22

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Kokai Jitsuyo Shinan Koho	1971-2001	Jitsuyo Shinan Toroku Koho	1996-2001
Jitsuyo Shinan Koho	1926-1996	Toroku Jitsuyo Shinan Koho	1994-2001

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	JP 11-328716 A (NEC Corporation), 30 November, 1999 (30.11.99), Full text; all drawings (Family: none)	1-6 7-11
Y A	JP 10-302289 A (Ind. Technol. Res. Inst.), 13 November, 1998 (13.11.98), Full text; all drawings & US 5974020 A	1-6 7-11
Y	JP 10-320815 A (Yamaha Corporation), 04 December, 1998 (04.12.98), Full text; all drawings (Family: none)	1-6
Y	JP 6-259804 A (Matsushita Electric Ind. Co., Ltd.), 16 September, 1994 (16.09.94), Full text; all drawings (Family: none)	1-6

☒ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:
 "A" document defining the general state of the art which is not considered to be of particular relevance
 "E" earlier document but published on or after the international filing date
 "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
 "O" document referring to an oral disclosure, use, exhibition or other means
 "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
 "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
 "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
 "&" document member of the same patent family

Date of the actual completion of the international search
 22 October, 2001 (22.10.01)

Date of mailing of the international search report
 30 October, 2001 (30.10.01)

Name and mailing address of the ISA/

Authorized officer

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP01/00691

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	JP 9-270145 A (Sony Corporation), 14 October, 1997 (14.10.97), Full text; all drawings (Family: none)	5 1-4, 6
X Y	JP 2000-268391 A (Minebea Co., Ltd.), 29 September, 2000 (29.09.00), Full text; all drawings (Family: none)	7-9 10-11
Y	JP 2000-105943 A (Sanyo Electric Co., Ltd.), 11 April, 2000 (11.04.00), Full text; all drawings (Family: none)	10-11
A	JP 2001-76371 A (Sankyo Seiki Mfg. Co., Ltd.), 23 March, 2001 (23.03.01), Full text; all drawings (Family: none)	1-11
A	JP 2000-260052 A (Pioneer Electronic Corporation), 22 September, 2000 (22.09.00), Full text; all drawings & EP 1037206 A	7-11